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THE TRUTH OF IMMEDIATE KNOWLEDGE

DISCUSSIONS of epistemology often divide knowledge into two kinds, the immediate and the mediate. The distinction itself is made in at least two different contexts, first in the relation of knowledge to its "object," and second in the relation of two types of knowledge. When knowledge is said to be immediate in the first instance, there is said to be no "idea" between the object and the subject. Neo-realists, I take it, are immediatists in this sense of the word; critical realists, I believe, are not. This note is not interested in this problem, but in the second.

In the second instance, immediate knowledge is used to denote perceptual as opposed to conceptual knowledge, acquaintance as opposed to description, intuition as opposed to reason, direct as opposed to derived knowledge. The term seems to connote an absence of inference or even of thought, to denote an apprehension of what may be called a cognitive content, unmodified—at least as far as one is aware—by preconceptions, ideas, past experience, or anything else. That which is known in such cases of knowledge has been said to be directly present to the subject which without delay—whence I suppose the word "immediate"—grasps it or knows it.

But here again a difficulty of terminology arises. Some epistemologists have maintained that the cognitive content is a term, like "redness," or a group of terms, like "a red book" or "a red book on the table." Others have said that it is always a "meaning" expressed in the form of a proposition, "That is red," or "That is a red book," or "A red book is on the table." It would be difficult, if not impossible, to make clear how the first set of expressions might be called true or false except metaphorically. For this paper "immediate knowledge" will refer to the judgments made about the objects of intuition. To use Mr. Santayana's language, it will refer to "belief" and not to "intuition." These judgments seem to be made without reflection in ordinary perceptual experience and furthermore to be true. Yet have they any essential difference from other species of knowledge?

It undoubtedly looks as if there were knowledge of this kind.

When one sees a color or hears a sound, introspection seems to reveal nothing objective except the color or sound. One does not seem to be aware of something modifying the color or the sound, something, for instance, like inference or doubt or fear or comparison. One seems merely to open one's eyes and judge, "Red," or one's ears and judge, "Miau."

Because of the sureness of such judgments and the clearness and distinctness of their subject-matter, we are likely to assert that that which is immediately known is true and that consistency with it is a good test of truth. It is the assertion that a judgment not based upon a sensation is false. Some people have even gone to the extent, when they have identified immediate knowledge with sensations, to insist that not only is it logically prior to all knowledge, but also genetically prior. The two claims are obviously different. Avoiding that problem, however, let us admit the folly of denying that most of our immediate knowledge is true. But let us insist upon the wisdom of asking why.

To begin with, let us at the risk of banality list the well-known cases in which it is false.

1. *The Case of Sensory Illusions.*—These are explained away by immediatists by pointing out (*a*) that they are perfectly lawful, occurring always under certain known conditions, or (*b*) that not our senses but our interpretations of them are erroneous. Both of these statements are obviously true. But neither lessens the difficulty that if we did not mediate, *i.e.,* reflect upon, make inferences from, interpret the content of these particular immediate experiences, we should continue to be deceived by them. That is, they would continue to be false as long as they remain immediate.

2. *The Case of Images and Percepts.*—Experiments made by Mrs. Perky suggest—though they do not prove the point absolutely as she says herself—that there is no qualitative difference discoverable between a visual sensation and a visual image. These experiments seem to be borne out by our everyday acquaintance with dreams and hallucinations even of the mildest sort. We are unable to distinguish between the content of a dream and waking life until reflection sets in. During the experience—at least in some cases—the subject is entirely deceived. By subsequent mediation he discovers his error.

3. *The Case of the Perception of Past Stimuli.*—If undulatory theories of light and sound be well founded, immediate knowledge asserts the existence of non-existent objects of sight and hearing in some instances. To discover the truth here requires mediation beyond the abilities of most of us, namely, a course in physics.

4. *The Case of Sensory Adaption and Fatigue.*—This is the

reverse of the third case. Here we are led to assert the non-existence of objects which really exist. When one becomes adapted to sensation, the sensum disappears. But the physical stimulus of the sensation still exists, although impotently. Nor will it ever be known to exist unless reflection of some sort corrects the report of immediate knowledge.

Let us add to these cases of false immediate knowledge two reasons which lead one to doubt its value as a test of truth.

1. It is subject to revision. One may extend the implications of true knowledge or trace it back to its source or amplify it in other ways, but if true it ought to continue as it is. Yet it must be evident that the mere repetition of many stimuli will lead to a revision of the immediate knowledge of them. One has only to sit in a room before a piano and strike a chord repeatedly; as it is repeated its perceived character will vary. There is nothing mysterious about the variations; memory, attention, comparison, and the like all help to sharpen certain features of which one was not aware at first. If one stayed within the limits of the immediately given, one would be forced to the conclusion that the stimulus had changed. But we know from the conditions of the experiment that it has not.

2. It is not over-individual. Truth, as the old phrase goes, is supposed to be binding on all men. Scientific egoism would be considered at the least bad taste. But it is admitted by almost every one that immediate knowledge varies to a scandalous extent with its subjects. I do not mean that the memory of the knowledge varies, but that the actual percepts do. In the case of perceptions it is agreed, I believe, that what is perceived depends in part, not only upon the percipient's physiological makeup, but also upon his expectations, his desires, his past training, and in the case of psychological experiments upon the instructions given. If a percipient were to base all his knowledge on some individual's immediate judgments, he would spend his life wondering—if he were the individual chosen —why he had such difficulty in making himself understood. If someone else were chosen as the standard knower, he would be equally tried by the difficulty of understanding him. If a percipient were to limit himself to his own immediate experiences, he would never discover how peculiar to himself his knowledge is. It is only by comparing it with other people's that he makes this discovery. But that comparison is a transcending of the immediately given.

These considerations lead one to suspect that immediate knowledge is not truer in its essence than any other kind of knowledge.

Immediatists usually admit this as a matter of fact and practice, for they in general have some type of immediate knowledge

which they believe to be false. If the immediately given were the true, there would be no way of distinguishing between the truth of, say, Mr. Holt's earlier realism and that of the mystic vision. But what realist of that type ever granted the testimony of mystic visions because of their immediacy? Introspection seems to reveal only an object in perceptual experience. The only introspective evidence to the contrary, as far as I know, is that of Miss Calkins and her school who find also a self. Some other epistemologists maintain that perception involves an "act of awareness" in addition to the object of knowledge (as Plotinus did, for that matter), but they are not likely to assert that it is discovered introspectively for evident reasons. Mr. Holt in those days maintained that there was no existential difference between the subject and the object in perception, just as Jacob Boehme asserted that there was none in the ecstatic vision.

It is a singular illiberality of the non-mystical immediatists to deny the truth of the mystic vision. Their first objection has been that the mystic vision is the peculiar acquisition of the few, whereas ordinary sense-perception is the possession of everybody. The appeal to common experience, when made by an immediatist, is, of course, powerful. When the testimony of a few people is contradicted by that of great multitudes, it ought undoubtedly to be ruled out of court. Yet the testimony of crowds of witnesses who have not been on the scene of a crime and hence testify that they did not see it may not overbalance that of the few who were present and did. Nor would any one in most matters dream that it might. The mystic does not deny that most men have not enjoyed the mystic vision but, after all, he is splendidly candid in telling them how to enjoy it. One has only to follow the mystic way. There are numerous men who have carried out the recipe to a highly satisfactory conclusion. They have lived in divers ages and countries. What possible way is there of disproving the report of an immediate experience? If a sensationalist's reports on his are accurate, why are a mystic's false?

The second objection has been that the beatific vision is ineffable or incommunicable. As *Scepticism and Animal Faith* has so well demonstrated, so is a color or taste. The only way of communicating a sensation is by producing it. Non-mystic perceptions seem more communicable because they are more common. But, it will be noticed, mystics have no difficulty in talking about their cognitive object among themselves. If we were as unwilling to taste and smell as we are to follow the mystic way, we might with equal common sense be arguing that certain savors and odors are merely the

experiences of highly nervous and eccentric people, like trances, hallucinations, and second sight.

But there is a fundamental difference between the theory of the mystic vision and of the non-mystic. Mysticism recognizes that immediate knowledge—in one case at least—comes at the end of a course of training and not at the beginning. The course of training is, to be sure, ethical rather than scientific, to which there may be reasonable objections. Yet there is something very fruitful in the suggestion that knowledge does not rise in immediacy, but moves towards it. For it indicates why immediate knowledge seems to be true and why it seems to involve nothing but the presentation of an object.

If immediate knowledge were not the beginning of wisdom but the end, if it were the result of learning like playing the piano or reading, it would have the same character of trueness that it actually has and also the same absence of detailed consciousness. If we examine the learning of something, such as running down stairs, we notice—it is a trite enough remark—that the process starts with awareness of many sensations and motor adjustments and ends with practically all of them outside of the field of awareness. When the process is learned one is scarcely aware either of the stairs or of one's feet—both *sine quibus non* of the process—but run down them automatically. If a lateral cross-section were to be taken of one's awareness of that point, would it include any evidence that the process had been learned? Yet before the learning of it, what suspense, anxiety, doubt, wonder, bewilderment! "What ought I to do?" one asks kantianwise.

This is true also of learning to perceive something. When we actually have a new experience—a rare enough occurrence in an adult to be sure—such as falling in love or merely tasting an unfamiliar sauce, our minds are not occupied with knowledge of or about the experience, but with wonder and suspicion. "What on earth is the matter with me?" or "Ought I really to continue eating this?" more accurately represent the subject's state of mind than the sentences, "I am in love," or "This is saffron." Yet if knowledge were a complex of basic immediate experiences, how could this be possible? There is no place for questions in a world known truly through unaided contemplation.

The lesson would be more striking if one would examine the reactions of subjects who are constantly having new experiences, that is, babies. Unhappily we know very little of infantile perception and one hesitates to say anything definite about it. Yet it looks as if a child when presented with a new stimulus did not drink it in and recognize it from then on. It attempts almost from birth

to experiment with it, by correlating, for instance, visual and tactile sensations. Observing a child closely over months leads one to believe that he sees the process of perceiving growing more and more sure, just as an adult in learning to see pictures finds with growing surprise that new elements of composition are appearing to him daily. Were not the immediate perceptions of adults once as tentative and faltering as those of a child?

If what we call immediate knowledge were learned knowledge, it is easy to see why it should seem and often be true and why it should seem to involve nothing but a presentation. We justly have faith in any habit and none involve much awareness. Yet no one would dream of maintaining that no habits could be improved, simply because we have faith in them—although no one would suggest it until he had lost his faith in them. Nor, what is more to the point, would one maintain that perfect skill in playing the piano was a prerequisite in learning to play. Yet that would not be so different an opinion from the opinions of immediatists. It is not much different from Plato's theory of reminiscence by which one had to be born a full-fledged philosopher before one could begin to reason.

If our knowledge were composed of atomic true perceptions, why should elaborate training be required to perceive a thing "as it is"? How could analytical knowledge arise? Why should the knowledge of different people be different? Why should men disagree in their descriptions of the world?

This note does not answer these questions, but it suggests how they may be answered. It admits, if one wishes that there are two kinds of knowledge, the immediate and the mediate, but it argues that "immediate" should mean not "not-mediated," but "well mediated"; it prefers the terms "doubtful" and "true." It is aware of the fact that in a logical system one starts with truth to generate truth, but insists that in cognition the start is at best in hypotheses. Finally it makes no claim to originality. The psychological facts and the philosophic theory have been known for years. Familiarity with them has perhaps caused the contempt with which they are usually received.

GEORGE BOAS.

THE JOHNS HOPKINS UNIVERSITY.

A NOTE ON "THE PLACE OF ETHICS IN PHILOSOPHICAL EDUCATION"

PROFESSOR Carritt's recent aritcle in this JOURNAL (October 8, 1925) on "The Place of Ethics in Philosophical Education" refers to the existence of a conception of moral philosophy amongst

the uninitiated and even the "technical philosophers" that is quite at variance with the detachment which it is held should characterize the philosophical study of morals. His observations on the prevalence of what is for him a misconception of the nature and scope of moral philosophy, which he found from his teaching experience in America, calls attention to a somewhat deep-seated ambiguity as to the exact meaning and scope of the term.

That the ambiguity exists, probably nobody would care to deny. Its existence is confirmed not only by the familiar expectations of sophomores that moral philosophy may somehow make them better creatures, but also by the character of certain text-books on the subject which attempt to shed light on the perplexing problems of conduct, both private and public.

And yet it is probably safe to assume that the majority of us who teach ethics to undergraduate students begin by disclaiming for the subject any power to make them more moral than they are, and for ourselves any intention of doing more than inquiring dispassionately into the nature of the moral life. Our purpose, we say, is not hortatory, and any beneficial effects upon character that may follow will be quite incidental. Knowledge of the rules and principles of hygiene, we may tell them, does not necessarily produce health. Knowledge is not virtue, but of course the knowledge that comes with a deepened insight may lead to more excellent lives. Thus almost cavalierly do we dismiss the question of the "practical" value of the study of ethics. Parenthetically, I sometimes wonder whether teachers of ethics, after disabusing the student mind of false notions regarding the character of the subject, feel their vanity just a little tickled when students, at the close of the course, speak of the great benefit that they have derived from so valuable a study. For teachers like to be told that they humanize subjects!

The fact is, what has been put out of the door returns rather persistently through the window, and we find many a teacher of moral philosophy sitting in judgment upon the ideals of life represented by the different types of ethical theory. If, for example, life for him is more than "a brief and somewhat discreditable episode on one of the minor planets," will he not criticize an ethic which encourages such a view of life? He may not make his course "practical" in the sense of introducing the moral case system. Such casuistry involves attention to minutiæ that are perhaps beneath his notice. But he does often convert the scientific analysis of the nature of moral obligation into a quest of what is obligatory. And in so doing he can not with consistency eschew all interest in the "practical" value of ethical study. Then, in order to fulfill the requirements of a more impersonal and detached scrutiny of the moral judg-

ment as a thing in itself worthy of investigation, perhaps he will furnish in a more advanced course in ethics the study of moral philosophy as Professor Carritt conceives it. With the possible merits of such educational procedure we are not here concerned.

Admitting now the ambiguity, its very presence in philosophical education is, if not justifiable, at least intelligible. Why does the ambiguity exist? Three reasons immediately suggest themselves, and there may be more than three.

As I see it, a heavy weight of philosophical tradition is behind the concept of moral philosophy as a "practical" study. Our moral philosophy began with the avowed purpose of providing a remedy for moral and social decline. The concepts which called for clarification through the Socratic insight were concepts of specific and generally admitted virtues. To be sure, there was to be no preparation of a calendar of virtues, but an adequate appreciation of them was to have a remedial and ameliorative effect. And in the minds of Plato and Aristotle, ethics, as the science of the highest good, was inseparable from πολιτικὴ. For Aristotle, it will be recalled, the former is a propadeutic to the latter.

In the second place, the history of ethical thought and instruction shows a close association with religion, to which, by a rather general consent, a mandate over man's spiritual interests has been traditionally awarded. The repudiation of the mistress by the handmaid, whenever this has taken place, has not resulted in the latter vacating the premises. On the contrary, she has sought to enlarge the dwelling and move in. In extending the meaning of the term "spiritual" philosophy has sought to guide the whole life of man.

Thirdly, the development of the scientific method and spirit has familiarized us not only with the idea of critical and systematic procedure, but also with the concept of control. The extension of the Baconian dictum to the field of social phenomena is thus quite natural, and may be viewed as a return to the Socratic position that knowledge is virtue.

The American *penchant* for the pragmatic and the puritanical, which other peoples sometimes dwell upon to explain our processes, may here be passed over. In the three reasons mentioned above perhaps we have a sufficient explanation, if not justification, of the present ambiguity as to the proper scope and function of moral philosophy.

Having admitted the ambiguity, and having accounted for it, in part at least, the question is raised: Should moral philosophy continue to play the dual rôle? Conceding that there is a science of ethics that does not teach us either to be good or that we ought to be good any more than logic teaches us how to think or that we ought

to think, or esthetics teaches us how to appreciate beauty and that we ought to love it, there yet remains the question, is there a legitimate place in philosophical education for a science of ethics which frankly does not disclaim a "practical" interest? Is there a science of ethics that is "practical" in something more than the Protagorean sense of supplying instruction in "how to manage our homes in the best way, and to be able to speak and act the best in public life"? (Such instruction might well encourage sophistry and the casuistry of which Professor Carritt speaks.) Is there, in other words, a science of ethics which is "practical," not in the sense of telling the pupil what moral decisions to make, but in cultivating the ἔρως φιλοσοφίας which would render possible well-considered choices? If there is not a place for such a science, it seems hardly forthright or consistent to perpetuate the ambiguity. If there is a legitimate place for it, it is the duty of moral philosophers to terminate the present ambiguity by explaining it. We can scarcely afford to laugh at or deny it.

WILLIAM S. A. POTT.

UNIVERSITY OF VIRGINIA.

BOOK REVIEWS

Dædalus, or Science and the Future, J. B. S. HALDANE; *Icarus, or the Future of Science,* BERTRAND RUSSELL; *Tantalus, or the Future of Man,* F. C. S. SCHILLER. New York: E. P. Dutton & Co. 1924.

These three prophetic essays, all of which deal with the future influence of our scientific knowledge, represent respectively the varying viewpoints of a biologist, a logician, and a humanist.

All three writers see ahead failure and possible catastrophe through man's inability to adjust his morals to his greatly extended powers. The two latter writers view this prospect with a certain emotional concern. Both see the cause of failure in man's inherent unreasonableness: *Icarus* stresses the incompetency of government; *Tantalus,* faulty education. The author of *Dædalus,* after the fashion of the worker in natural science, views the same prospect with apparently complete detachment, but foresees hopeful possibilities through "the inexorable logic of facts" which have a tendency "to magnify injustices until they become too intolerable to be borne," so that "the average man whom all the prophets and poets could not move turns at last and extinguishes the evil at its source."

In this writer's own attitude, we have an example of the temper of the scientific worker who "sings as he adventures with the world."

His equability and detachment are necessitated by his work of dealing with facts beyond his control, which compel his acquiescence after long-continued suspension of judgment, regardless of his will or wish, regardless of fiat of God or welfare of man.

Since the solution of the problems raised by *Dædalus* involves all the matters discussed in the succeeding essays, it will not be necessary to consider in detail anything more than the substance of this first book.

If we can avert another world war which will set civilization back for a couple of thousand years, in the near future science will give us a world in which there will be no night, practically no space to separate but only to unite; a world in which war, international and industrial, will cease by becoming such intolerable evils that men will be forced to abolish them; in which power will be cheaply and easily supplied from sun and wind, education will be improved and scientific knowledge become so commonplace that even artists and poets will possess it and reflect it in their works; in which drugs will immensely increase the power and endurance of mankkind and subdue their evil passions, and synthetic foods will do away in large measure with agriculture.

These are a few of the wonderful achievements of physics and chemistry, which are to make this world like the fairyland of the child and the heaven of the adult. They may or may not materialize, according to whether or not men acquire morals suited to the new order, or, realizing the impossibility of this, suppress scientific activities before they blow man and his earth into space. At any rate, the meaning of the words "matter" and "space" in future will be altered. For, as our present materialistic (mechanistic) method of investigation and our materialistic metaphysics resulted from Newton's discoveries, now a Kantian idealism is already taking its place, since Einstein has proved the world of matter, time, and space to be a shadow of a five-dimensional world—a Kantian *ding-an-sich* which is already being accepted by most physicists and will soon become the basis of a common metaphysical theory adopted by all.

But leaving all these wonders as the probable outcome of developments in the field of physics and chemistry, the author goes on to the more important part of his prophecy, which is concerned with future progress in biology. In the near future scientific interest will lie chiefly in this field of investigation which to-day is only in its infancy.

We are asked "to excuse what at first sight might appear as improbable or indecent in any speculations" which are made, and "to dismiss from our minds the belief that biology will consist merely

in physical and chemical discoveries as applied to man, animals and plants''; for ''biological invention . . . tends to begin as a perversion and end as a ritual supported by unquestioned beliefs and prejudices.'' The author supports this contention by referring us to four biological inventions of the prehistoric past, each of which has formed the basis of a religion.

He tells us that ''the chemical or physical inventor is always a Prometheus,'' and he thinks that ''the sentimental interest attaching to Prometheus has unduly distracted our attention from the far more interesting figure of Dædalus''; not Dædalus the inventor of the flying machine, but Dædalus the biological inventor, the deicide.

The biological inventor is at present the most interesting and romantic figure in the world. By biological invention is meant ''the establishment of a new relationship between man and the other animals or plants, or between different human beings, provided that such relationship is one which comes primarily under the domain of biology, rather than physics, psychology or ethics.''

At present we are ''almost completely ignorant of biology.'' ''Darwin's results are beginning to be appreciated with alarming effect on certain types of religion, those of Weismann and Mendel will be digested in the course of the present century, and are going to affect political and philosophical theories almost equally profoundly. . . . As time goes on a series of shocks of the type of Darwinism will be given to established opinions on all sorts of subjects''; but ''far more profound will be the effects of the practical applications of biology.''

Already science has altered our moral codes. Pasteur's discoveries have changed the moral quality of resignation under the affliction of contagious disease from a virtue into a vice. Already modern methods of warfare have made of patriotism, which was once ''a fire upon the altar,'' a ''world-devouring conflagration.'' So, out of science new virtues grow; old virtues become vices.

Nevertheless, long ago Dædalus demonstrated that ''the scientific worker is not concerned with gods''; and future biological discovery is likely to change immensely our moral code by the production of ectogenetic children. This is the centre of interest for future biology.

This biological progress may prove ''incompatible with certain of our own social evils.'' ''The future will be no primrose path . . . . It is hopeful only if mankind can adjust its morality to its powers.''

Whether this last invention of ectogenetic children will have an effect like that of the motor-driven tanks of the world war and force mankind to abolish old evils in order to escape the greater new evil of this new manner of reproduction, or whether it may be like the

too-successful experiment in induced radio-activity suggested in an earlier passage and destroy in some future moment the world of men whose life it has learned to control too well, the author does not say. The prediction of an artificially controlled conception and embryonic development is one which quite justifies the author's preparatory warning to the reader; and it may be scientifically absurd; but in any case it serves to illustrate very vividly the *kind* of social problem which scientific work in biology is likely to raise.

Icarus gives us an interesting account of organization as necessitated and at the same time made possible by science. Its author thinks that all scientific advances will be used to promote the interests of dominant groups and he foresees an era of force and cruel tyranny after which a long struggle may win for man at last a tolerable existence. The weakness of his prophecy appears to lie in the assumption that those conditions are permanent which at present seem to necessitate the ultimate survival of the type of social organization he pictures. This assumption is characteristic of a habit of thought which distinguishes the logician from the natural scientist. It is by no means a necessary premise. Progress in science itself may at any time alter these conditions completely: the very cheap production of energy, such as recent achievements in engineering appear to foreshadow, would tend rather to emancipate than to enslave the individual and to diffuse population. If such influences were to prevail in the future, Mr. Russell's imagined tyranny of concentrated power would be impossible.

But another possibility suggests itself: The scientific worker, because he investigates everything without ulterior motive, is fertile in discovery and as a consequence of this his price has already risen in the industrial market. If governments and industrial powers continue to invade his province, scientific development may be definitely suppressed in some fields by the forced direction of his interests towards others, and knowledge for the sake of knowledge may cease to describe his spirit. In this event, even Dædalus, the biological inventor, the deicide, may cease to sing as he continues to undermine and alter the species of which he is a part.

Tantalus in a graphic allegory tells the story of man's inner problems. Its author sees hopeful possibilities through eugenics and the developments of applied psychology; and thinks "poor Tantalus . . . may muddle along for a good while yet," even though, "biologically speaking, Man has ceased to be a progressive species long ago." Mr. Schiller's most interesting suggestion is embodied in this remark and its elaboration.

After all, only the "inexorable logic of facts" can reach the intelligence of "the average man"; and perhaps this is well. Facts speak slowly, but more surely and more forcibly than the best theories.

Also, perhaps men have usually been *good* enough; perhaps they have been too greatly occupied with being good and have only failed to grow sufficiently *wise* to live successfully in this world, through their preoccupation with another imagined world (here or hereafter) where absolute good prevails—so leaving the actual struggles and the tangible spoils to those less good. It is easier to obtain knowledge than wisdom. Where little knowledge is concerned it is less difficult to be wise. But it is wisdom which man needs, rather than morals or goodness—wisdom sufficient to cope with the immense bulk of the knowledge that has been so quickly acquired in the scientific field. To acquire this sufficient wisdom would be a task indeed, even for a man fresh from the hand of God.

Thus far, the lesson of Dædalus carries. The philosophical import of the essay is not so clear.

Why the author should or how he can make of an idealistic or mathematical or logical method of handling our universe a metaphysical hypothesis is not easy to see. Physiology may, and we hope it will, invade the field of mathematical physics and modify its conceptions; but mathematical physics may remain a wholly trustworthy method still, *in its own sphere of relations* undestroyed and even undisturbed, as Euclidean geometry remains today.

A system of relationships extended beyond the legitimate sphere of geometry may find a trustworthy method of attack in mathematical physics: and when psychology has extended this sphere in turn, beyond the relationships which can be handled legitimately by mathematical physics, then something like Bergsonian activism may define the system so extended—but no destruction of any system or theory, geometrical or mathematical, is necessitated so long as it remains a scientific scheme of correlations and is not elevated into a definite metaphysics.

For this reason there would seem to be wisdom in abandoning for the present at least, all metaphysical theories.

A. B.

The Crisis in Psychology. HANS DRIESCH. Princeton University Press. 1925. xvi + 275 pp.

This book—so we learn from the Preface—comprises a series of lectures delivered by the author during 1922–1923 at several universities in China and Japan. All of the book which deals with

normal psychology was delivered in the form of a single lecture at Columbia University. The author is professor of philosophy at Leipzig University, and is probably best known in the country as a biologist and a champion of vitalism.

In brief, the book may be said to consist of a discussion of several "psychological problems" deemed highly important by Professor Driesch. As explained by the author, the term "crisis" used in the title means that certain "critical points" in present-day psychology are to be considered, *i.e.*, problems "of the very first order," which it is necessary to settle definitely if psychology is to progress as a science. The four "crucial" problems thus understood by Professor Driesch to be of preëminent importance are (1) the problem of the "fundamental materials and laws of 'normal psychology,' pure and simple," (2) the mind-body problem, (3) the problem of the unconscious, and (4) the problem of psychical research, or to use the author's term, parapsychology. These we may consider in order.

After defining psychology as the "theory of the variety of all of the somethings which I may consciously have, and of the laws which govern the sequence of the various somethings in time" (p. 2), Professor Driesch proceeds to a criticism of what he terms the "older psychology" on the grounds that it took account only of sensations and images and not of "meanings and significances." To remedy this defect, and to explain the meaning of the "somethings" which are "consciously had," the author develops a theory of psychical elements or "suchnesses" and a theory of complexes, or "complex psychical somethings." These theories occupy nearly 50 pages, and constitute a highly technical discussion of what the author believes to be the attributes of psychic elements. Elements, or "pure suchnesses," we are told, possess certain characteristics or "accents" among which may be mentioned spatial and temporal accents, accents of order, of truth, of existence. Complexes, which are formed of these elements, may be classified as "sensible complexes," thoughts, and feelings. Incidentally, thought is defined as "those conscious somethings the elemental constituents of which are to a great extent or almost exclusively of the type of so-called 'abstract' nature, *i.e.*, strictly speaking, meanings or significances" (p. 31).

Having discovered the existence of elements and complexes, Professor Driesch next takes up the question of how elements ever get associated into complexes in the first place, or as he puts it: "Given a sequence in time of somethings consciously possessed by the I or Ego, what forms of order are to be discovered among these somethings with regard to their temporal sequence?" (p. 43). The answer given by the author is the time-honored Law of Association

which, however, is amended somewhat to include certain "dynamic" factors which are denominated by Professor Driesch "limiting or directing agents." These factors may be conscious or unconscious, and in a general way seem to correspond to what we have been accustomed to think of—more simply, perhaps—as the individual's past experience plus the specific "mental set" of the moment.

So much for "normal psychology" as understood by Professor Driesch. To those of us who have been led to believe that modern psychology is a science and not a cult; that its subject-matter is concerned primarily with the behavior of the human organism in the face of certain environmental stimuli (extrinsic or intrinsic); and that the purpose or aim of modern psychology is the prediction and control of the responses to such stimuli, Professor Driesch's idea of "normal psychology, pure and simple," will come with a distinct shock of surprise. As we read through the discussion, however, surprise rapidly gives way to incredulity that this can actually be "modern psychology"; and finally incredulity yields to a feeling of dismay at the utter futility of the whole discussion. It is only within the last decade or so that psychology has reached the point where it is something more than an indoor pastime for certain speculatively-minded philosophers; and Professor Driesch's "normal psychology" is an atavistic reminiscence of these psychologic "dark ages." One can well imagine the chagrin—not to say disgust—of the eager student who comes to psychology to learn something of himself, his problems, and human nature in general, on being told that the chief characteristics of modern psychology—"which constitute its very essence" are (1) "The inactivity of the conscious Ego; (2) Forms of meaning as being already present among the elements of psychic conscious objects; (3) Directing-agents in the service of order as the main factors in psychical, unconscious, dynamics;" and (4) "The critical foundation of all and the starting point of the discussion, the primordial fact: 'I consciously have something'" (p. 80).

In the second section, entitled "Psychophysics," Professor Driesch attacks his second "critical" problem, *viz.*, the mind-body relation. Psychophysical parallelism or "psychomechanical parallelism," as it is called, is criticized at much length, and finally discarded in favor of a kind of metaphysical parallelism (apparently equivalent practically to what is commonly called interaction). between the "entelechy" of the body and the "soul." These two, according to the author, are "one in the sphere of the Absolute." A brief discussion of Weber's Law precedes the criticism of psychophysical parallelism.

Even if one has the courage (not to mention the capacity!) to follow Professor Driesch's argument, it is extremely doubtful whether he will know any more psychology when he is done. Psychophysics —certainly, the psychophysics of Fechner—is almost a dead letter in present-day psychology, while the mind-body problem has been relegated almost entirely to courses in systematic psychology and philosophy. The mind-body problem is no more a major problem today than, say, the problem of imageless thought; and neither of these is very "critical." Professor Driesch ends his discussion with a short appendix on "Insanity."

Not much need be said of the third and fourth "critical" problems, *i.e.*, the problem of the unconscious, and parapsychology. The unconscious is for Professor Driesch "a something which, though belonging to the psychical sphere and not being physical, is yet not something which 'I have' or 'have had.'" Under the unconscious are put dreams, hypnosis, dissociation, *etc.* Parapsychology includes telekinesis, levitation, materialization, *etc.* The book closes with sections on "The Problem of Freedom" and "Immortality."

As Professor Driesch's book deals with metaphysics and not with psychology, it is rather difficult to estimate its value as a treatment of psychological principles. To the reviewer, the book seems unfortunate, to say the least, in that it totally misrepresents the spirit and the standpoint of modern psychology. Behaviorism is dismissed in two pages; the work of the American psychologists is completely ignored except for a single reference to Thorndike, Watson, and Yerkes as capable workers in animal psychology. Intricate and involved discussion of time-worn topics, fine verbal distinctions, many exclamation points, and much use of italics replace the statement of quantitative results and quotations from data experimentally verified. In short, the book probably falls somewhere between valid inquiry into mental organization and futile and verbose speculation.

H. E. GARRETT.

COLUMBIA UNIVERSITY.

Instinct, a Study in Social Psychology. L. L. BERNARD. New York: Henry Holt & Co. 1924. 550 pp.

At a time when our orthodox psychological textbooks are still giving fealty to the instincts, it is instructive to find this extremely thorough critique contributed by a sociologist. The abandonment of the instinct category has been brought about, not chiefly as a result of experimental work in psychology, but rather through the very damaging influence of such analyses as are to be found in Dewey's *Human Nature and Conduct,* Josey's *Social Philosophy of*

Instinct, Allport's *Social Psychology,* and the present volume. The original nature of man, as expounded in college classrooms, has undergone an astounding series of changes during the past decade. There can be little doubt that the older formulations (*vide* the McDougall school) were unsound and harmful, but we have no more certainty that the present-day theorists know their ground; our facts are practically as meager as ever, in spite of a continuous flood tide of speculation. On the constructive side, then, we are likely to find that Bernard has given us little of value. He reports as his purpose the "investigation of the relative importance of instinct and habit —of the inheritance and the environmental factors—in the development of social institutions and social control." The term "investigation" raises hopes which the work, of course, fails to satisfy. The only data reported are those derived from researches in library alcoves, compendious studies of the opinions of others. It is revealed that 495 books were combed for contraband material on instinct, and that 14,046 counts were compiled, involving a total of 5,759 different kinds or classes of instincts and instinctive attitudes. There is a slight hint of arithmomania in this study, which the reviewer hopes will not serve as a precedent for others; the writing of a concordance of dead usages is scarcely a substitute for laboratory work, however effective it may be in showing the chaotic state of our definitions.

Professor Bernard is painstaking in his criticism of the instinct hypothesis applied to complex action patterns. It is, after all, not so difficult to prove that the factor of environment influences every behavior series. With a proviso in favor of certain of the simpler reflex systems, Bernard is confident that the human adult retains no units of response which can be designated as inherited units. "An instinct is a complex instinctive mechanism which has remained intact. . . . The only complex mechanisms which remain intact in man are those connected with the vegetative, reproductive, excretory and similar primitive processes, particularly those controlled by the older autonomic and glandular adaptations. . . . Our present-day usage of the term instinct contains too many of the sophisticated and learned activities of man" (pp. 84–86). Bernard supports this view in a series of exhaustive and somewhat repetitious chapters. Such a destructive analysis, however, can be carried much further than Bernard seems willing to venture, his reluctance being due, apparently, to the fact that the next step in analysis would force him to abandon a large part of his later inquiry as logically absurd. For if we insist on defining instinct as an activity process which has been "inherited," and which has not been remade in the course of making new adjustments (p. 84), we must acknowledge at the outset

that the search for any instincts at all is doomed to failure. It is a truism to state that all action patterns are determined by environmental pressures acting upon germinal predispositions. We have conventionally applied the term "instinct" to those patterns which have developed under conditions only slightly variable among different members of the species. Instinct, then, is "acquired" subject to certain relatively universal environmental pressures; habit is "acquired" under conditions, chiefly post-natal, which are somewhat more variable throughout the species. The adaptation processes giving rise to habit are primarily behavior adjustments (involving, let us say, substitutions in a stimulus-response series), but it is impossible to distinguish sharply between such modifications and those which are originated as biochemical and physiological adjustments. If the criterion of an instinctive activity process is to be stated as the presence of a structural basis fixed by the chromosomes (p. 5), certainly the problem has gained nothing in scientific accessibility; there can exist nowhere in the nervous system of an infant, even at birth, a structural organization which has not been modified in some degree by (*a*) unique individual organic conditions and (*b*) unique neuromuscular and neuroglandular responses in utero. As an environmentalist, Bernard has rendered psychology a service in helping to bury some of the earlier speculative conceptions of instinct; it is regrettable that he did not completely reject the instinct-habit dichotomy, and thus clear the way for an unprejudiced experimental study of development.

H. E. JONES.

COLUMBIA UNIVERSITY.

The Scientific Approach to Philosophy. Selected Essays and Reviews. H. WILDON CARR. London: Macmillan & Co., Ltd. 1924. Pp. viii + 278.

The occasional essays republished in this volume give a sampling of Professor Carr's interests, for they touch at various points upon the theory of relativity, "the new idealism," monadology, and the philosophies of Henri Bergson and Benedetto Croce. The introductory essay is new, and discusses the relation of science to philosophy. It holds that philosophy and science differ not in subject-matter but in attitude. "Philosophy regards the reality of the universe primarily in its universal aspects as a whole. . . . The philosopher is therefore essentially synoptic in his outlook and systematic in his observation. . . . The philosopher proceeds from the whole to the parts, and never loses hold of the whole in his interpretation of the parts. The scientific worker proceeds in the reverse direction. He

attends to the parts not as parts but as possessing reality in their own right, and by discovering relations he constitutes not systematic wholes but invariable laws'' (pp. 2–4).

To the reviewer Professor Carr is a little of a paradox, for his science is up to the minute while his philosophical prepossessions seem just a bit old-fashioned. On the one side, reference is continually being made to the theory of relativity and the new physics; while on the other philosophy is represented as ''an effort to apprehend the whole . . . in an intuition.'' Two comments suggest themselves:

(1) It appears unwise, until we know more about astronomical physics and its bearings on terrestrial processes, to build philosophical skyscrapers on foundations suggested by the theory of relativity. The natural result, in the present state of our knowledge, would be the construction of new dogmas to take the place of the old, with the consequent eventual production of a new host of artificial problems pressing for their dialectical solutions. The present philosophical value of the new physics is primarily destructive. It can be employed to great effect in the business of destroying dogmatisms based on the Newtonian categories. Anything is to that extent good which attacks the primitive laziness of philosophers, and convinces them that they must earn the right to their subject-matter by honest toil. Professor Carr is quite right—the subject-matter of science and philosophy is the same; but the philosopher himself, like other men, can not successfully take over his data at second hand without denying himself important opportunities for understanding and appreciation.

(2) Professor Carr's philosophy, like that of most Bergsonians, is really unhistorical. This is so although it identifies the concepts of philosophy and history (pp. 51–59). It is actually almost entirely dialectical; that is, it is developed in terms of ''duration,'' ''life,'' ''memory,'' and other similar concepts, rather than in the light of historical and social fact. This is illustrated by the following quotation: ''For philosophy, therefore, the *Critique of Pure Reason* . . . is primarily a work of art, with the unity, indivisibility, and individuality which a work of art possesses. This means that it was conceived as a whole, then worked out into its parts, and not built up laboriously out of minute and accumulated investigations'' (p. 58). The antithesis here indicated is eminently unhistorical. It may confidently be asserted that neither in philosophy nor in art, nor for that matter in science, do workers ever proceed by either of these methods in isolation. Always do vision and observation supplement and depend on each other. This is one of the main fruits of concrete biographical study. It is a part of the nature of thought to waver, halt, alter its course, and correct itself.

When philosophy is studied as a historical phenomenon, many of its previously arbitrary problems are solved by being viewed in the settings which generated them, while other neglected questions needing investigation are revealed. Philosophy has usually been derivative while pretending to be architectonic; it is time that it should resign its pretensions and become a colaborer with other human activities in the fields of truth.

It is very much to Professor Carr's credit that he does not regard science and philosophy as enemies or competitors. Yet he does speak of "a comprehending reality" (*i.e.*, the knower as such) which lies outside the realm of science (p. 10; also Essay VIII), although this does not well accord with his view that philosophy and science have the same subject-matter.

JOHN STORCK.

COLUMBIA UNIVERSITY.

Ultimate Values in the Light of Contemporary Thought. J. S. MACKENZIE. London: Hodder and Stoughton, Ltd. New York: George H. Doran. 1924. Pp. x + 191.

The substance of this small book was delivered in lecture form at various places in India and the United States. In the first of its three main parts Dr. Mackenzie presents his theoretical outlook in terms of the well-worn dichotomies—form and matter, space and time, appearance and reality, potentiality and actuality, realism and idealism; in the second he discourses of theories of value, whether objective, subjective, or spiritual; and in the third are developed some of the applications of the idea of value in ethics, religion, and practical life.

The outlook is mildly idealistic. The ultimately real is a system of universals, and individual objects are correctly grasped when they are seen in relation to the whole. All is not necessarily spirit, but everything must be interpreted in the light of a spiritual principle. Dr. Mackenzie, that is, as readers of his previous books are aware, bases his idealism primarily on the notion of value. Values are neither merely objective nor merely subjective, but always involve a certain relation of persons to things. And the ultimate value in the end is beauty—beauty, that is, which is actively created rather than passively received. As Dr. Mackenzie points out, this view sounds truer in French, German, Scotch, or Greek than in English. Beauty is intended to include "every mode of apprehended perfection" (p. 141). The beauty that is created has value; while the creative power itself has worth.

Without too great presumption, this position may be regarded as a pleasing indication of Dr. Mackenzie's own personal proclivities

and interests. He is not quite content to let matters rest here, however, for philosophers never like to mention beauty without pausing to pay their respects to truth and goodness. Accordingly we read, "The supreme modes of worth, understood in this sense, would seem to be wisdom (or insight), goodness (or love) and creative power. These, working together, give reality to beauty. Nothing is beautiful that is not in some way apprehended as real; and, in this sense, truth is necessarily included in beauty. Apart from this, truth can hardly be regarded as having value in itself" (p. 146). This whole process of making beauty real (and here we come to what Dr. Mackenzie regards as the principal contribution of this book) is brought about by the work of the creative imagination.

Upon this basis Dr. Mackenzie concludes that moral goodness consists in the possession of worth rather than in the actual production of values; that worship means concern with worth; that economic goods derive their "real value" from their relation to ultimate values; and that "labor . . . in its most perfect and most definitely creative forms would seem to be the very end of human existence" (p. 183).

The book is studded with an unusual number of apt quotations, and may be counted on to yield numerous by-products of wisdom and shrewdness to its readers.

JOHN STORCK.
COLUMBIA UNIVERSITY.

JOURNALS AND NEW BOOKS

REVUE NEO-SCOLASTIQUE DE PHILOSOPHIE. XXVI^e Année, No. 8. In memoriam, Léon Becker: *N. Balthasar.* La place de James dans l'évolution de la psychologie contemporaine: *A. Fauville.* Le doute initial de l'épistémologie: *J. Henry.* Après le Congrès thomiste—La discussion sur le réalisme: *L. Noël.*

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NOTES AND NEWS

DeWitt H. Parker, Professor of Philosophy in the University of Michigan, will deliver a course of six lectures on "The Analysis of Beauty" at the Metropolitan Museum of Art, New York City, January 4, 7, 11, 14, 18, and 21, 1926. The subjects of the lectures are as follows: What is Art?; The Problem of Esthetic Form; Form and Representation in Painting and Sculpture; Beauty and Pain; The Paradox of the Industrial Arts; The Function of Art.

Copies of letters, unpublished monographs, lectures, and other materials which would throw light on the "personal" as well as philosophical aspects of the work of Charles S. Peirce are desired for use in a critical biography of Peirce. Any data which have not as yet seen the light of publication will be welcomed. All communications may be addressed to A. H. Schneer, P. O. Box 24, New York University, University Heights, New York City.

At the Northampton meeting of the Eastern Division of the American Philosophical Association, December 28, 29, and 30, 1925, officers for the coming year were elected as follows: President, Professor W. E. Hocking; Vice President, Professor Jared S. Moore; Secretary-Treasurer, Professor Harvey G. Townsend.